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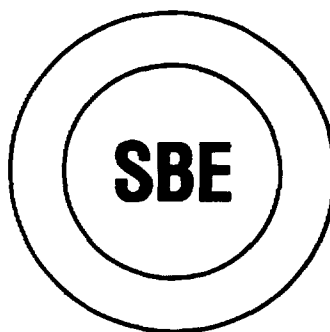
MAR 29 1999

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

**Reply Comments of the
Society of Broadcast Engineers, Inc.**

ET Docket 98-206

**NGSO FSS Systems
Operating in the
13 GHz TV BAS Band**



March 29, 1999

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SOCIETY OF BROADCAST ENGINEERS, INC.
Indianapolis, Indiana

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)

Amendment of Parts 2 and 25 of the)
Commission's Rules to Permit Operation)
of NGSO FSS Systems Co-Frequency with)
GSO and Terrestrial Systems in the Ku-)
Band Frequency Range)

and)
Amendment of the Commission's Rules)
to Authorize Subsidiary Terrestrial Use)
of the 12.2-12.7 GHz Band by Direct)
Broadcast Satellite Licensees and Their)
Affiliates)

ET Docket No. 98-206
RM-9417
RM-9245

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FEDERAL COMMUNICATIONS COMMISSION
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To: The Commission

Reply Comments of the Society of Broadcast Engineers, Inc.

The Society of Broadcast Engineers, Incorporated (SBE), the national association of broadcast engineers and technical communications professionals, with more than 5,000 members in the United States, hereby respectfully submits its reply comments concerning the above-captioned Notice of Proposed Rule Making ("NPRM") proposing to allow the use of terrestrial "Gateway" uplink stations in the 12.75-13.25 GHz band for communications with non-geostationary satellite orbit ("NGSO") satellites.

There Is a Need To Carefully Control NGSO Use of 12.75-13.25 GHz

1. The comments of Teledesic LLC ("Teledesic") urge the Commission not to "micromanage" what it calls the "Gateway Bands," which, for the proposed 12.75-13.25 GHz portion, is more accurately referred to as the 13 GHz TV Broadcast Auxiliary Service ("BAS") band. However, SBE believes that the proposed narrow definition for "gateway" stations is both appropriate and imperative to ensure that the number of such stations is truly small (approximately 30 such stations, nation-wide), as promised by SkyBridge. A small number of gateway stations is a cornerstone requirement for allowing NGSO fixed service satellites ("FSS") to share these frequencies with broadcasters, cable operators, and Private Operational Fixed Service ("POFS") licensees. Contrary to the Teledesic claim that "no legitimate goal" would be served by prohibiting service links as well as gateway uplinks in

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the 13 GHz TV BAS band, a very obvious, and legitimate, goal would be served: preventing the disruption of existing service.

An Exclusion Zone Is Imperative

2. Two commenters, Denali Telecom and SkyBridge LLC ("SkyBridge"), claim that 100-kilometer exclusion zones for Gateway uplink stations are unnecessary. They are wrong. As pointed out by the Fixed Point-to-Point Communications Section, Wireless Communications Division of the Telecommunications Industry Association ("TIA") and also the Fixed Wireless Communications Coalition ("FWCC"), the 3.7–4.2 GHz band has become virtually unusable to terrestrial point-to-point microwave links that were to supposedly be co-primary with C-band television receive-only ("TVRO") because of the obligation of newcomer or modified Common Carrier microwave links sharing that band to have to protect such TVROs. The reason for the effective preclusion to terrestrial microwave links is the Commission policy to allow TVROs to routinely request protection over the entire band, as opposed to only those frequencies that the receive site could demonstrate it actually needed to use. In contrast, the Commission would never allow a terrestrial microwave applicant to be licensed for, and require others to protect, frequencies not actually in use. Indeed, it is for that reason that the Commission's Rules apply minimum bit per Hertz efficiency requirements for point-to-point terrestrial microwave stations.

3. The Commission must not allow this same preclusion and *de facto* re-allocation to occur in the 12.70–13.25 GHz TV BAS band. First, Gateway uplink stations must be excluded within 100 kilometers¹ of the top 50 population centers. This preclusion distance is need to ensure the continued ability for extreme short-haul building-to-electronic news gathering ("ENG") truck service; such temporary fixed links can now be coordinated but don't need Gateway uplink interference to complicate matters in the major metropolitan areas. Second, each Gateway uplink station must only be licensed for, and entitled to protection for, those frequencies that it can demonstrate it can actually immediately place into service. To this end, FWCC's proposal for a minimum efficiency of 4 bits/Second/Hertz, minimum dish size of 4.5 meters, and coordination obligations only over the azimuth and elevation angles a Gateway station will actually use are right on the mark and should be adopted.

¹ SBC Communications, Inc. urges a 200-kilometer exclusion zone. SBE believes that this would be excessive.

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4. SBE also agrees with FWCC's position that if a newcomer Gateway station elects to accept a higher than desired interference objective when coordinating, then terrestrial fixed links that subsequently coordinate need only protect to that higher interference level.

TV BAS Channels Reserved for TV Pickup Stations Must Be Off Limits

5. SBE is not particularly surprised to find that not a single one of the NGSO FSS parties even appear to realize that four 13 GHz TV BAS channels, A19, A20, B19 and B20, between 13,150.0–13,212.5 MHz, are reserved for TV Pickup, or mobile, operations, and as such cannot share spectrum with Gateway uplink stations. Gateway uplink stations must simply be precluded from operations on these four channels.

SkyBridge's Concerns About Sharing DBS Frequencies with Northpoint Is Ironic

6. SBE finds it ironic that the SkyBridge comments express such great concern about the Northpoint petition, which proposes to re-use 12.2–12.7 GHz DBS frequencies by installing terrestrial transmitters and providing subscribers with a second receive dish, aimed in a different direction from the dish aimed at a constellation of moving SkyBridge satellites. This is the same concept (*i.e.*, that of frequency re-use) that SkyBridge so blithely assures terrestrial microwave users can accommodate Gateway uplink stations. But now that the shoe is on the other foot, the SkyBridge comments go on for many pages on why the sharing of DBS frequencies is a bad idea and could not possibly work. Like SkyBridge, SBE similarly wants to ensure that Gateway uplinks will, in fact, not significantly reduce the ability of terrestrial TV BAS licensees to modify their existing systems, or to add new links. SkyBridge made this assertion in its Rulemaking Petition, and the SBE wants to see the Commission hold SkyBridge to that promise.²

² The July 3, 1997, SkyBridge Petition for Rulemaking stated, at Page 12, that "The use of such traditional coordination measures will not be burdensome to either SkyBridge or to FS operators, as discussed in Section IV of the Amendment. There should be no significant reduction in the ability of existing FS operators to add new links to their systems."

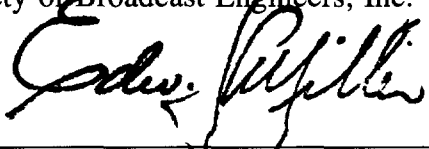
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Summary

7. The proposed narrow definition for Gateway uplink stations is appropriate and necessary. Gateway uplinks must be excluded from the top 50 population centers, must be required to build spectrally-efficient facilities that are only protected for frequencies actually in use, and must be precluded from operating on frequencies reserved for TV Pickup stations which, because of their portable nature, cannot be guaranteed protection by newcomer Gateway uplinks.

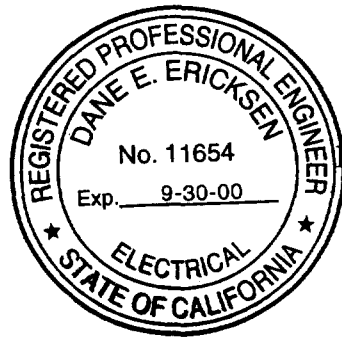
Respectfully submitted,

Society of Broadcast Engineers, Inc.

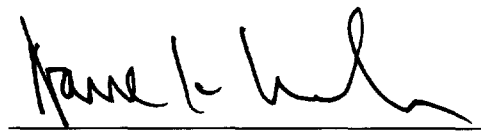


By

Edward Miller, CPBE
President

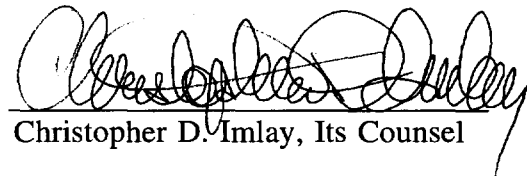


By



Dane E. Ericksen, P.E., CSRTE
Chairman, SBE FCC Liaison Committee

By



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March 29, 1999

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